AMENDMENTS TO THE CLAIMS:

Please amend claims 16, 20, and 24, as indicated below. This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1.-15. (Canceled)

16. (Currently Amended) A method for modulating optical radiation, comprising the steps of:

phase-modulating the optical radiation with a modulation signal, by using a modulator, so as to obtain a multi-level phase shift key optical signal comprising a stream of optical pulses, wherein each of said optical pulses has a respective optical phase value related to said modulation signal; and

applying to each of said optical pulses [[a]] an approximately constant phase-shift having [[an]] a predetermined absolute value and a sign related, for each of the optical pulses, to said respective optical phase value.

17. (Previously Presented) The method of claim 16, wherein said phase-shift is substantially constant in each of said optical pulses.

18. (Previously Presented) The method of claim 16, wherein the absolute value of said phase-shift is equal to or less than about $\pi/10$.

19. (Previously Presented) The method of claim 16, wherein said modulator has an extinction ratio and the absolute value of said phase-shift is determined as a function of said extinction ratio.

20. (Currently Amended) The method of claim [[16]]19, wherein the absolute value of said phase-shift is equal to about $arctg\left(\frac{1}{ER_{lin}}\right)$, wherein ER_{lin} is the extinction ratio.

21. (Previously Presented) The method of claim 16, further comprising the steps of:

providing a first and a second logical signal (S_1, S_2) linked with said modulation signal;

generating a first and a second driving signal for said modulator from said first and second logical signal; and

establishing said sign as a logical function of said logical signals.

22. (Previously Presented) The method of claim 21, wherein said logical function is equivalent to NOT[XOR(S_1,S_2)].

23. (Previously Presented) The method according to claim 16, wherein said multilevel phase shift key optical signal is a differential multilevel phase shift key optical signal.

24. (Currently Amended) A method of optical communication comprising transmitting an optical signal at a first location and receiving the optical signal at a second location different from the first location, wherein transmitting comprises modulating the optical signal by performing at least steps of:

phase-modulating the optical signal with a modulation signal, so as to obtain a multi-level phase shift key optical signal comprising a stream of optical pulses, wherein each of said optical pulses has a respective optical phase value related to said modulation signal; and

applying to each of said optical pulses [[a]] an approximately constant phase-shift having [[an]] a predetermined absolute value and a sign related, for each of the optical pulses, to said respective optical phase value.

25. (Previously Presented) An electro-optical apparatus for modulating optical radiation based on a modulation signal, comprising:

an optical modulator capable of receiving optical radiation and generating a multilevel phase shift key optical signal including a stream of optical pulses, each having a respective optical phase value related to said modulation signal, said optical being capable of being driven by a first and a second driving signal (S_1, S_2);

a phase-shifter optically connected to the optical modulator, capable of applying to the phase of each optical pulse a phase-shift having an absolute and a sign depending, for each of the optical pulses, on said respective optical phase value; and

a logical circuit capable of generating a third driving signal (S_3) logically related to said first and second driving signals, the logical circuit being logically connected to the phase-shifter for feeding said third driving signal to said phase-shifter.

26. (Previously Presented) The apparatus according to claim 25, wherein said third driving signal (S_3) determines said sign of said phase shift.

27. (Previously Presented) The apparatus according to claim 25, wherein said optical modulator comprises a dual-drive Mach-Zehnder modulator.

28. (Previously Presented) The apparatus according to claim 25, wherein said optical modulator is an optical modulator capable of receiving optical radiation and generating a quadrature phase shift key optical signal.

29. (Previously Presented) An optical transmitter comprising an optical source optically coupled to an electro-optical apparatus for modulating optical radiation based on a modulation signal, the electro-optical apparatus comprising:

an optical modulator capable of receiving optical radiation and generating a multilevel phase shift key optical signal including a stream of optical pulses, each having a respective optical phase value related to said modulation signal, said optical modulator being capable of being driven by a first and a second driving signal (S_1, S_2);

a phase-shifter optically connected to the optical modulator, capable of applying to the phase of each optical pulse a phase-shift having an absolute value and a sign depending, for each of the optical pulses, on said respective optical phase value; and

a logical circuit capable of generating a third driving signal (S_3) logically related to said first and second driving signals, the logical circuit being logically connected to the phase-shifter for feeding said third driving signal to said phase-shifter.

30. (Previously Presented) An optical communication system comprising an optical transmitter for transmitting an optical signal, an optical receiver for receiving the optical signal, and an optical communication line connecting the transmitter to the receiver, wherein the transmitter comprises an electro-optical apparatus for modulating optical radiation based on a modulation signal, the electro-optical apparatus comprising:

an optical modulator capable of receiving optical radiation and generating a multilevel phase shift key optical signal including a stream of optical pulses, each having a respective optical phase value related to said modulation signal, said optical modulator being capable of being driven by a first and a second driving signal (S_1, S_2);

a phase-shifter optically connected to the optical modulator, capable of applying to the phase of each optical pulse a phase-shift having an absolute value and a sign depending, for each of the optical pulses, on said respective optical phase value; and

a logical circuit capable of generating a third driving signal (S_3) logically related to said first and second driving signals, the logical circuit being logically connected to the phase-shifter for feeding said third driving signal to said phase-shifter.

31. (Previously Presented) The method according to claim 19, wherein said function is a decreasing function with increasing said extinction ratio.

32. (Previously Presented) The apparatus according to claim 25, wherein said third driving signal (S_3) is logically related to said first and second driving signals (S_1, S_2) through the logical relationship NOT[XOR(S_1,S_2)].